ADAPTED PHYSICAL EDUCATION TEACHERS' ATTITUDES TOWARD CURRICULAR OUTCOMES FOR PHYSICAL EDUCATION

by

Tacara M. D. Lovings

A thesis submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Master of Science

Department of Exercise and Sport Science

The University of Utah

December 2014

The University of Utah Graduate School

STATEMENT OF THESIS APPROVAL

The thesis of **Tacara M. D. Lovings**

has been approved by the following supervisory committee members:

Hester Henderson	, Chair	**6/13/14** Date Approved
Timothy Brusseau	, Member	**7/10/14** Date Approved
Steven Prewitt	, Member	Date Approved

and by **James Hannon** , Chair/Dean of

the Department/College/School of **Exercise and Sport Science**

and by David B. Kieda, Dean of The Graduate School.

ABSTRACT

Within the field of adapted physical education, there is a lack of knowledge about who is delivering services and what attitudes they hold for curricular outcomes. The purpose of this study was to discover current adapted physical educators' attitudes towards curricular outcomes for physical education. The teacher's attitude and orientation towards specific topics and activities in physical education have the ability to influence students' physical activity level and overall physical literacy. The data indicated that adapted physical educators who teach students with mild and moderate as well as severe disabilities placed importance on all physical education domains, but they placed more importance on social development and physical activity and fitness followed by self-actualization and motor skill development, respectively. We find that adapted physical educators differ slightly from previously studied preservice educators and general physical educators who placed more importance solely on the domain of physical activity and fitness. Interestingly, adapted physical educators reported that most of their instructional time was spent on motor skill development despite the fact that they ranked this domain as the fourth out of five in terms of importance.

This is dedicated to my parents, Forrest and Valerie, who have given more than I know to provide me with all the wonderful experiences that I have had thus far in my life. Thank you for your personal sacrifices in order to help me succeed.

TABLE OF CONTENTS

LIST OF TABLES

ACKNOWLEDGEMENTS

I have to begin by first thanking Dr. Hester Henderson. Without her, much of this would not be possible. From the first time I spoke with her on the phone, I could already feel her passion and care that she had for the field and for her students. I appreciate her accepting me into her program and for accepting all of my rants and comments along the way. Thank you for pushing me to challenge myself and to help me create this wonderful thesis. I also appreciate the guidance from my committee, Dr. Timothy Brusseau and Steven Prewitt. All of the meetings, edits and practice presentations truly helped me through this process. I appreciate the time you spent on me in this past year. Thank you to Morgan Hall. You have spent countless hours working with me. I am not sure how I would have done the statistical analysis without you. I appreciate your patience and time.

I also need to thank Steph Groff and Brock McMullen for spending hours scouring the Internet for the contact information. Thank you for giving up those Saturdays for me. Thank you Abbie Lee, for listening to me think out loud and hearing my thesis proposal 10 times and never appearing bored. Thank you Trei Chae for your unfaltering positivity and turning this thesis in for me.

Lastly, I would like to thank Bethany Reel. Thank you for all your support through graduate school. Your understanding of my responsibilities helped me focus on the tasks at hand. I appreciate your allowing me to work into the wee hours of the night. Without this support, I would not have had the focus and drive to finish.

CHAPTER I

INTRODUCTION

Background Information

Using a prevalence-based model, it is estimated that over 3 million students in the United States are eligible to receive adapted physical education services (U.S. Department of Education, 2012; Zhang, Kelly, Berkey, Joseph, & Chen, 2000). With an average caseload of 51 students as described by Obrusnikova and Kelly (2009), there is estimated to be approximately 61 thousand adapted physical educators delivering services to those students nationwide.

There is a lack of knowledge about the attitudes towards curricular outcomes for physical education that adapted physical educators hold. The educators' curricular attitudes, based on their belief systems, will lead the educators to select the specific content for physical education (Parajes, 1992). Discovering the attitudes of adapted physical educators toward curricular outcomes and what they are actually teaching can help Physical Education Teacher Education programs better design their curriculum in order to best prepare adapted physical educators teachers for the current job market. Discovering the attitudes of these educators, as well as what they are teaching in their classes, will aid in legitimizing adapted physical education. This knowledge will allow the field to demonstrate the current attitudes and current content featured in their classes to those who think that adapted physical education is optional, or a related service, and

that it follows the premise that adapted physical educators just want their students to be "happy, busy, good."

Adapted physical education and general physical education are not considered "core" subjects, and it has been noted that physical education has traditionally experienced flexibility in determining and delivering curriculum when compared to subjects like math and reading (Behets, 2001; Kulinna, Brusseau, Ferry, Cothran, 2010). With the introduction of the Common Core Standards for Math and Reading in 2009 and the adaptation of those standards by 44 states (Common Core State Standards Initiative, 2014), we might be presented with Common Core State Standards for physical education in the near future. Discovering the curricular attitudes of adapted physical educators and the content they are currently teaching will help to develop Common Core State Standards for adapted physical education that are appropriate and relevant.

Behets (2001) used the Value Orientation Inventory (VOI) to measure value orientations of preservice and in-service physical educators in Belgium. Behets found that 637 preservice and in-service general physical educators that completed the VOI had very similar value orientations, placing high importance in one or more value orientations. The VOI features five value orientations: social responsibility, disciplinary mastery, learning process, self-actualization, and ecological integration. Gender did not provide a significant difference; however, significant differences were found between teachers with fewer years of teaching experience and teachers with the most years of teaching experience. It was also reported that preservice teachers in a university 4-year program to obtain a degree to teach secondary physical education scored significantly higher in the disciplinary mastery value orientation and lower in the social responsibility value

orientation when compared to nonuniversity preservice teachers who attended a program for 3 years to obtain a certification to teach primary physical education.

Kulinna and Silverman (2000) measured the attitudes towards physical activity and fitness of 217 current physical educators. The purpose of their study was to discover the attitudes towards the following curricular outcomes: physical activity and fitness, self-actualization, motor skill development, and social development. Using the "Attitudes Toward Curriculum in Physical Education," this investigation found that physical education teachers at the middle and high school level placed more importance on physical activity and fitness, while physical education teachers at the elementary level placed more importance on motor skill and social skill development. It was noted that teachers in their first few years of teaching placed less importance on physical activity and fitness because of their commitments to behavior management. Their research also discovered that educators with 3 or more years of experience rated physical activity and fitness more importantly than more novice teachers.

Kulinna, Brusseau, Ferry, and Cothran (2010) examined preservice teachers' belief systems towards the curricular outcomes of physical activity and fitness, self-actualization, motor skill development, and social development using the "Attitudes Toward Curriculum in Physical Education" based on region and year in school. Using the survey instrument previously created and validated by Kulinna and Silverman (1999), 486 preservice physical educators at 18 universities participated. It was noted that preservice physical educators incorporated their Physical Education Teacher Education (PETE) program's mission statement and belief systems into their own beliefs systems (Kulinna et al., 2010; Matanin & Collier, 2003). Preservice physical educators rated all

domains highly, but rated physical activity and fitness as the most important domain for physical education followed by self-actualization, motor skill development, and social development, respectively. Although no significant differences were found between year in school and region of school attended, knowledge of preservice physical educators is critical to the field of physical education.

Statement of the Problem

The purpose of this study was to determine the attitudes of adapted physical educators towards curricular outcomes for physical education and what content is being taught in adapted physical education.

Research Questions

1. What are adapted physical educators' attitudes towards curricular outcomes, physical activity and fitness, self-actualization, motor skill development, and social development?
2. How does reported physical education content taught and the attitudes towards curricular domains of adapted physical educators compare?
3. Do adapted physical educators' attitudes towards curricular outcomes, physical activity and fitness, self-actualization, motor skill development, and social development differ from the attitudes of general physical educators?
4. Do adapted physical educators' attitudes towards curricular outcomes differ from the attitudes of preservice general physical educators?
5. Do adapted physical educators with licensure, endorsement, or national certification (Certified Adapted Physical Education [CAPE]) for adapted physical

education have different attitudes towards curricular outcomes than adapted physical educators without licensure, endorsement, or national certification?

6. Do adapted physical educators with 5 or more years of teaching experience have different attitudes towards curricular outcomes than adapted physical educators with less than 5 years of teaching experience?

Limitations and Delimitations

This study was subject to the following limitations.

1. The investigator was unable to control the honesty with which the respondents answered the survey.
2. The investigator was unable to control how the respondents perceived the questions in the survey.
3. Adapted physical educators responding to the survey did so voluntarily, and their responses may have differed from those who refrained from responding.
4. Some educators did not respond to every question.
5. The cover letter was first sent to the Special Education Director for that district, which may have affected and limited the access to the adapted physical educators for that district.

The following delimitations applied to this study:

1. A return rate of 55.3% of completed survey instruments.
2. Phase 1 of the survey distribution selected school districts with at least 15,000 students.
3. Adapted physical educators in Phase 1 were to be employed by a Public School System and must teach adapted physical education for at least 51%

of their instructional time.

4. No delimitations applied to Phase 2 of the survey distribution.

Definition of Terms

The following is a list of terms.

Adapted physical education - physical education, which has been adapted or modified, so that it is as appropriate for the person with a disability as it is for a person without a disability (APENS, 2008).

CAPE Certified - A Certified Adapted Physical Education teacher passed the certification test and all criteria established by Adapted Physical Education National Standards (APENS).

Curriculum - the totality of learning experiences provided to students so that they can attain general skills and knowledge at a variety of learning sites (Marsh & Willis, 2003).

Curricular Outcome - Physical activity and fitness, self-actualization, motor skill development, and social development (Kulinna et al., 2010).

Disability - "'child with a disability' means a child, with mental retardation, hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), serious emotional disturbance (referred to in this title as 'emotional disturbance'), orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities; and who, by reason thereof, needs special education and related services" (IDEA, 2004, Part 300.A, 300.8), and that the disability adversely affects the child's education.

Motor Skill Development - "acquiring prerequisite motor skills needed for successful participation in many activities and sports" (Kulinna et al., 2010, p. 191).

Physical Activity - "Participation in physical activity leading to physical fitness" (Kulinna et al., 2010, p. 191).

Preservice Educator - a college or university student in a teacher education program.

Self-Actualization - "focus on developing self-esteem, self-confidence, enjoyment, and self-efficacy for participating in physical activity" (Kulinna et al., 2010, p. 191).

Social Development - "creating social skills and behaviors as well and an appreciation and acceptance among K-12 students" (Kulinna et al., 2010, p. 191).

CHAPTER II

REVIEW OF LITERATURE

Adapted Physical Education

The first adapted physical activity class took place in 1838 to students at the Perkins School for pupils with visual impairment. Adapted physical education began in a corrective nature, focusing on correcting postures and providing limited activities based on a recommendation from a physician (Winnick, 2005).

The legal fight for the rights of people with disabilities began prior to the 1970s, but Section 504 of the Rehabilitation Act of 1973 helped initiate the flow of services for children with disabilities into the public schools. The Section 504 Fact Sheet states, "individuals with disabilities are defined as persons with a physical or mental impairment which substantially limits one or more major life activities" (p. 1). While Section 504 provided some protection to those with disabilities, but it did not provide specific regulations on how to educate students with disabilities in the public schools. Public Law 94-142, The Education for All Handicapped Children Act of 1975 (P.L. 94-142), established many of the requirements and regulations known to educators today. It defined a ***handicapped child*** as "a child whose handicap adversely affects his/her educational progress" (Part 300.A, 300.8). In 1990, the Individuals with Disabilities Act (IDEA) reauthorized P.L. 94-142 and was later amended in 1997 and in 2004. IDEA requires physical education, and if necessary, specially designed physical education, for

all students with a disability if their peers without disabilities are receiving physical education. IDEA also requires that, when appropriate, children with disabilities are involved in the general curriculum as much as possible.

In IDEA ***special education*** is defined as "specifically designed instruction, at no cost to parents, to meet the unique needs of an individual with a disability, including instruction conducted in the classroom, in the home, in hospitals and institutions, and in other settings, and ***instruction in physical education"*** (Auxter, Pyfer, Roth & Zittel, 2010; IDEA, 2004, Part 300, A, 300.39). Special education explicitly includes instruction in physical education, physical education being the only curricular area mandated by law (IDEA, 2004). Physical education as defined in the law is, "the development of physical and motor fitness, fundamental motor skills and patterns, skills in aquatics, dance, and individual and group games and sports (including intramural and lifetime sport)" (Auxter et al., 2010; IDEA, 2004, Part 300, A, 300.39). Students with disabilities who qualify for special education services and demonstrate a need for adapted physical education are required by law to receive those services. Auxter et al. (2010) define adapted physical education as,

> "The art and science of developing, implementing, and monitoring a carefully designed physical education instructional program for a learner with a disability, based on a comprehensive assessment, to give the learner the skills necessary for a lifetime of rich leisure, recreation, and sport experiences to enhance physical fitness and wellness." (p. 2)

Within specially designed or adapted physical education, students can receive instructions in any of the five curricular areas of physical education as defined in the law.

DeNoon (1978) conducted a survey of adapted physical education in the State of Kansas. The results of this survey provided an overview of the state of adapted physical

education immediately after the passage of P.L. 94-142. This study reported on the results of 109 schools (elementary, middle, and secondary). Seventy-two percent of the schools had physical education programs for students with disabilities. In the majority of cases (98.5%), it was the physical educator who was providing services. Interestingly, at the high school level, the screening for placement in physical education was conducted by another staff member, counselor, or principal, and not the physical educator. Only one out of 109 schools reported having an adapted physical educator. The activities most commonly reported being taught to students with disabilities in physical education across all levels were ball handling skills, games and relays, and kicking skills, in that order. Of the physical educators providing services in 1978, approximately 30% had a bachelor's degree and just 15% of the educators had a master's degree. In the end, a call for more specially trained physical educators for students with disabilities was made.

In 1995, Chandler and Greene conducted a survey of 39 adapted physical educators and 148 regular physical educators to determine the use of least restrictive environments options, teachers' perceived needs, curriculum content, and activity options in regular physical education and adapted physical education. The Integration Status Questionnaire (ISQ) results for regular physical educators listed the following curriculum areas and their percentage of time commitments to physical education curriculum areas reported as the average reported time spent in that area: Lifetime Leisure (23.4%), Health-Related Fitness (24.3%), Movement Education (15.9%), Traditional Games (21.4%), and Sport Skills (24.9%). The ISQ results for adapted physical educators listed the following curriculum areas and their mean percentage of time commitments: Sensory-Motor Integration (17.3%), Lifetime Leisure (29.4%), Health-Related Fitness (32.7%),

Movement Education (28.0%), and Sport Skill (7.9%). Percentages do not equal 100% because they are averages of reported time spent. At the time of the survey, it was reported that 51% of the school districts in the United States did not have adapted physical education programs for their students with disabilities.

Values and Belief Systems

Parajes (1992) states that one's beliefs can be assumed to influence an individual's decisions and behavior. Preservice educators' beliefs have been observed to originate in several sources, (1) their K–12 physical education experience, (2) early field experiences, (3) reflections on past experiences and field experiences, and (4) their ability to reflectively and cognitively organize physical education subject matter (Kulinna et al., 2010). Researchers have found that a teacher's attitude and orientation towards specific topics and activities in physical education have the ability to influence students' physical activity levels and overall physical literacy (Pajares, 1992; Starc & Strel, 2012). Ernest (1989) found that two Mathematics teachers with a comparable knowledge base would select curricular outcomes and instructional delivery methods based on their own beliefs. Pajares (1992) states that beliefs become values, and beliefs, attitudes, and values become one's belief system.

Ennis (1992) conducted a study of value orientations and their impact on curricular decisions. The study investigated five value orientations: disciplinary mastery, self-actualization, learning process, social reconstruction, and ecological integration. These are defined by Behets (2001) as follows. Disciplinary mastery is physical mastery of physical and motor skills. Learning process focuses on the way in which those physical and motor skills are learned. Self-actualization is how the student's specific

needs are addressed within the curriculum. Social responsibility is developing positive interactions and relationships between the teacher and the student as well as the student and the other students. Ecological integration is the teacher acknowledging and focusing on the integration of the learners' knowledge base, the learner, and the social environment.

Three elementary physical educators with at least 15 years teaching experience within a school district with at least 30 thousand students were selected to participate in a study of value orientations in physical education (Ennis, 1992). Data were collected using observations, teacher and student interviews, and the Value Orientation Instrument (VOI). The results of this study revealed that one educator favored discipline mastery, one educator favored ecological integration, and the third educator favored self-actualization. Ennis (1992) states, "When physical education programs or classes are viewed as dynamic systems, value orientations may be conceptualized as strong attractors with the planning-teaching-learning process" (p. 372). This thought adds to the theory that value orientations have a direct influence on the curricular decisions of an adapted physical educator.

Curriculum

Curriculum for physical education has been noted to involve several interrelated factors. In physical education, Ennis (1992) contends that the person choosing the curriculum is the teacher. In this research article, Ennis reports data from two previous studies and a follow up study. In the first study, Ennis and Zhu (1991), investigated value orientations of physical educators in predominately White school districts using the VOI. They reported no significant differences of value orientations based on sex, years of

experience, or grade level taught. They found that physical educators placed more priority on the domain of ecological integration followed by learning process, self-actualization, social reconstruction, and disciplinary mastery. In a second study, Ennis, Chen, and Ross (1992) investigated physical educators in a predominately African-American school district again using the VOI. In this study, the majority of educators (57%) rated social reconstruction as the highest priority followed by ecological integration, learning process, self-actualization, and discipline mastery. The contrast between the results of the two studies called for the researchers to further investigate the other interrelated factors that affect value orientations and curriculum choices for physical educators.

Ennis, Ross, and Chen (1992) performed follow up research to compare and investigate the curriculum goals and the expectations of physical educators who belong in the category of socially oriented educators and those who belong in the category of content-oriented educators based on their VOI results. When comparing physical educators who place priority on discipline mastery and learning process to physical educators who place priority on ecological integration and social reconstruction, it is apparent that the educators' attitudes towards curricular domains for physical education influence the goals they create for their physical education classes (Ennis, 1992). The physical educators in the discipline mastery and learning process group featured classes that were set up to teach motor skills and fitness activities. The educators were the center of the class, selecting the material and deciding the activities the students would experience. In contrast, physical educators in the ecological integration and social reconstruction group featured class goals of social interaction, enjoyment of the activities,

and cooperation within the class between the teacher and the students (Ennis, 1992). The physical education goals were centered on changing for class, being on time, and participating in the class activities. The physical educator increased the self-confidence and self-esteem of their students by reporting the names of students who were changing for class and by giving out rewards at the end of class (Ennis, 1992). These educators were not aware of, or employing any, curriculum or instructional strategies to teach social responsibility or reflective thinking. Ennis goes on to state that physical educators may have a repertoire of teaching methods and preferred value orientations to use in particular teaching environments (Ennis, 1992). This point demonstrates that educators may shift their preferred beliefs systems depending on the situation they are teaching in, and that choices that educators make for the curriculum will change with the situation as well.

In order to increase the role of physical education in the nation's health battle against obesity, Ennis (2011) recommended using the National Association for Sport and Physical Education Standards to provide students with a variety of physical activities that they "need to learn to be physically active, want to learn...and enjoy learning because activities are meaningful and relevant" (p. 6). Results of Ennis's investigation found that increased practice and confidence in motor skills ultimately lead to increased overall physical fitness.

In the interest of investigating a connection between value orientations and actual curriculum taught, Kulinna, Silverman, and Keating (2000) conducted a study of physical educators. Participants were assigned to either the low physical activity and fitness group or the high physical activity and fitness group depending on their value orientations from a previous study. The System for Observing Fitness Instruction Time (SOFIT) was used

to measure time spent in physical activity. Using averages of time spent in specific areas, which will not equal 100%, high school students in the high physical activity and fitness group spent 48% of their class time in moderate to vigorous physical activity (MVPA), 19% in fitness activities, 19% in skill practice, and 32% in game play, while the high school students in the low physical activity and fitness group spent 43% of the class time in MVPA, 6% in fitness activities, 0% in skill practice, and 76% in game play. (Kulinna et al., 2000). Although this investigation did not determine any differences between groups, additional interrelated factors for deciding physical education curriculum helped explain the data. The researchers noted that despite the value orientation that a physical educator may hold, they might not be able to select and deliver the preferred content due to the organization of the physical education program, the space allotted, equipment available, and class size (Kulinna et al., 2000).

Certification

The introduction of No Child Left Behind in 2005 created a new notch on the hierarchy of teaching certification. This law emphasized the need for highly qualified teachers to increase student achievement. The criteria for a highly qualified teacher includes earning a 4-year college degree, acquiring a state teaching certification, and the demonstration of content knowledge that can be achieved through a teacher education program or a subject certification exam (U.S. Department of Education, 2005). PETE programs provide the subject knowledge, pedagogical knowledge, and clinical experience in physical education. The criteria for a highly qualified adapted physical educator, developed in a position paper published by the American Association for Physical Activity and Recreation (AAPAR, 2010), follows the outline for a highly qualified

special education teacher set by the IDEA. The AAPAR position paper stated that a highly qualified adapted physical educator, at a minimum, possesses knowledge and skills to be considered a highly qualified general physical educator. Additionally, highly qualified adapted physical educators will have experience and full preparation in specific areas of content knowledge, such as disability studies, assessment methods, report writing, special education law, development of individualized education programs, adaptations and modifications for physical education, behavior management, individual teaching and learning styles, collaboration and consultation skills, advocacy for individuals with disabilities and for adapted physical education, inclusion practice, instructional design and planning, community and family resources, professional leadership, and assistive devices for physical education (AAPAR, 2010; Kelly, 2006). The criteria for a highly qualified adapted physical educator and the preparation needed to experience those additional areas of content knowledge state that an educator would need to complete a full degree program and a minimum of a 150 hours of practicum experience, thus making them well prepared for teaching (Darling-Hammond, 2000).

The Adapted Physical Education National Standards (APENS) defines an adapted physical educator who has qualified to take and has passed the certification exam a Certified Adapted Physical Educator (CAPE). In order to qualify to take the exam, an educator must be either a graduate of a PETE program, a professional physical educator with more than 10 years of experience, or an educator in adapted physical education at the postsecondary level. An educator must also have a minimum of 12 semester hours that focus on individuals with disabilities with a minimum of 9 of those hours specifically in adapted physical education. The educator must also have a minimum of 200 practicum

hours teaching individuals with disabilities. The educator must also verify both their experiences and their completion of courses that focus on the same specific content knowledge required to be a highly qualified adapted physical educator. There are two additional ways to become certified. The first way is that a professional physical educator can demonstrate years of professional experience, knowledge, and involvement in the field of adapted physical education and the second way is that a professor in higher education can demonstrate involvement and experience teaching adapted physical education (APENS, 2008).

Starc and Strel (2012) conducted an investigation on primary schools in Slovenia. The purpose of this investigation was to compare the impact on students' physical fitness and physical development of the physical education program delivered by a physical education specialist with no professional preparation and the physical education program delivered by a certified physical education teacher who has obtained competencies learned through a PETE program. In Slovenia, primary grades receive physical education delivered by a generalist teacher (classroom teacher) while secondary level physical education is delivered by a physical education specialist. The investigation controlled for number of students, type of facilities, type of equipment used, and the content of the curriculum. The students in the control group taught by generalist teachers were found to be more deficient than the group taught by the physical education specialist in individual motor skills, relative explosive strength, running speed, and relative flexibility. When testing motor skills, the researchers used the SLO-FIT, a Slovenian monitoring system of motor and physical development that is similar to the Fitnessgram. Starc and Strel (2012) state that a physical education curriculum that primarily focuses on motor development

and muscular fitness and is planned and delivered by a physical education specialist can positively affect the fitness levels of the students. No research studies have been conducted to investigate the potential impact on the fitness and skill development of students receiving adapted physical education from a certified adapted physical educator.

Types of certifications have been researched as they reflect on teacher effectiveness. Darling-Hammond (2000) reports on several investigations that have found that teachers who complete less than full preparation, shortened, or alternative routes of certification "tend to have greater difficulties planning curriculum, teaching, managing the classroom, and diagnosing students' learning needs" (p. 8). It is also noted that teachers that are well prepared, graduate from 5-year degree programs, and fulfill yearlong student teaching placements, are more effective teachers than teachers who graduate from 4-year degree programs. Darling-Hammond (2000) also reports that educators who have followed this track of a full professional preparation have the ability to be as effective as teachers with more years of experience.

Teaching Experience

Measuring the relationship between teacher quality, teacher experience, and student achievement is nothing new and has been researched and discussed extensively in recent years (Di Carlo, 2010). In 2004, Hanushek, Kain, O'Brien and Rivkin, analyzed the correlation between years of experience and overall scores on Texas standardized tests. They found that significant gains were made on standardized test scores in the first years of teaching, with the most significant gains taking place after the first year of teaching experience.

In another research study conducted by the Center for Education Policy Research

(2011), researchers found that teachers became more effective in teaching math and language arts concepts within the first 2 years of teaching. It was also reported that more effective novice teachers were retained more often than less effective novice teachers in this school district (Center for Education Policy Research, 2011). From this research, we can arrive at the conclusion that teachers with more years of experience are more effective and their students will have increased achievement. Darling-Hammond (2000) states that many studies have determined that novice teachers, those with less than 3 years of experience, are less effective, but that the benefits of having more years of experience fade out after 5 years of teaching experience due to the issue that more senior teachers are less likely to keep up with their content area, do not attain additional certifications, and often become tired of the field. Ladd (2013) outlines the benefits of having an experienced teacher in an article that reports that recent research has shown that math teachers with 15 years of experience are twice as effective based on students' math scores than teachers with 2 years of experience. Research also shows that experienced teachers have the ability to spread their effectiveness to other areas outside of curriculum content (Ladd, 2013).

CHAPTER III

METHODS

Participant Selection

School districts from each state with at least 15 thousand students enrolled were recruited to participate in this investigation. If a state did not have at least one district with at least 15 thousand students, the largest school district in that state was selected to participate. An email was sent to the district special education administrators who were asked if their district had an adapted physical education teacher. If they did have an adapted physical educator, they were asked to provide the email address(es) of those educators, or they could inform their educators to contact the principal investigator. Special education administrators were also asked to reply to the email if they did not have an adapted physical educator in their district.

Description of the Sample

Adapted physical educators from 33 states participated in the survey. In this investigation, both genders were featured, but there were overwhelmingly more female participants (n = 162) than male participants (n = 68). Participants ranged in age from 23 to 61 years old and over (M_{age} = 44.34 years, ±17.31 SD). The adapted physical educators with 0 to 4 years of teaching experience represented 16% of the sample (n = 38), educators with 5 to 10 years of teaching experience represented 31% of the sample

(n = 71), and lastly, educators with 11 or more years of teaching experience represented 53% of the sample (n = 121). Table 1 reports information on setting of school district and grade level taught.

Approximately 50% of the school districts that participated in this investigation require some additional training or certification to be hired for an adapted physical education position (Figure 1). Thirty-nine percent (n = 55) reported that their district required an Adapted Physical Educator Certification, a license, or certification obtained

Table 1

Demographic Information

	n	%
Grade level taught[a]		
Preschool	79	33
Elementary	206	87
Middle School	187	79
High School	177	75
Setting of school district[a]		
Suburban	148	57
Urban	76	29
Rural	49	19
Level of Education[a]		
Bachelor's	72	31
Master's	150	65
Ph.D.	7	3

[a]More than one response possible

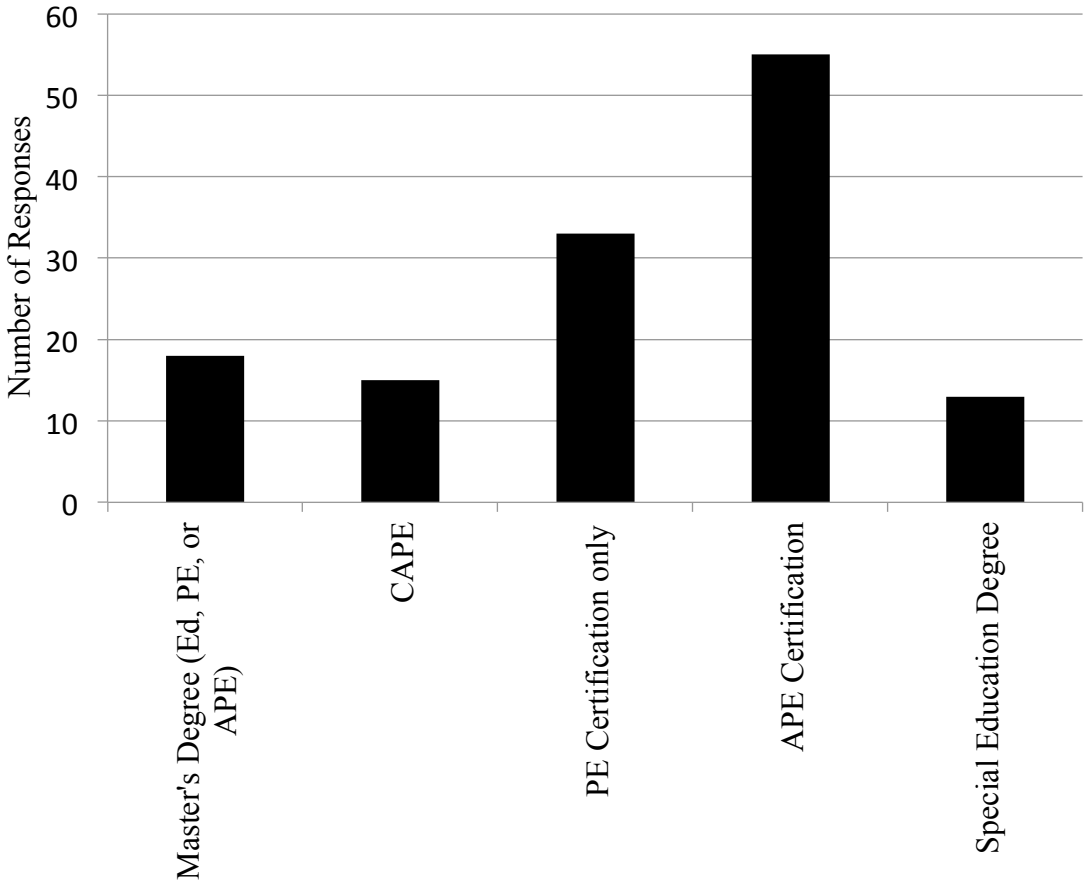

Figure 1: Trainings required by school districts for adapted physical educator positions

through the State's Department of Education. Many other districts (34%, *n* = 46) reported that a general physical education certification and/or a special education certification were sufficient to teach adapted physical education. Interestingly, only 11% (*n* = 15) required national certification in adapted physical education (CAPE).

In respect to the level of education of the respondents, 32% (*n* = 72) reported earning a bachelor's degree, 65% (*n* = 149) earning a master's degree, and 3% (*n* = 7) earning a doctoral degree. Sixty percent (*n* = 137) of the respondents reported that their undergraduate or graduate school featured an Adapted Physical Education major, minor,

or emphasis, and 54% (n = 124) of the respondents reported that they completed that Adapted Physical Education Program. In addition, 62% (n = 143) of the respondents reported that they held a state level endorsement, certification, or licensure in adapted physical education, and 49% (n = 113) reported being a Certified Adapted Physical Educator (CAPE).

It was indicated that the average caseload of adapted physical educators in this study was 68 students (SD = ±57.27). Within the sample population, 31% of educators serviced between 26 to 75 students. Caseloads ranged from 1 to 500 students. A vast majority of the respondents (96%) indicated that they taught students with mild or moderate disabilities, while 86% of the respondents indicated that they taught students with severe disabilities. This signifies that although some adapted physical educators teach only students with mild to moderate, most of them teach both populations.

A rank order table features the types of disabilities that the adapted physical educators reported teaching (see Table 2). All categories of disabilities were represented and all disabilities were taught by at least 49% of the sample population.

Survey Instrument

The survey used in this investigation is entitled *Attitudes Toward Curriculum in Physical Education.* It was previously reviewed by 28 physical education professionals before validity and reliability were established using 253 physical educators (Kulinna & Silverman, 1999). The instrument features a 5-point Likert-type scale (1 = *not important* and 5 = *extremely important*). It features 36 items in four domain areas: physical activity and fitness, self-actualization, motor skill development, and social development. In this

Table 2

Rank Order of Reported Disabilities Taught

Disability	*n*[a]	%
Autism	225	98
Intellectual disability (including Down syndrome)	224	97
Developmental delay	220	96
Multiple disabilities	218	95
Other health impairment	212	92
Orthopedic impairment	207	90
Visual impairment, including blindness	186	81
Hearing impairment	183	80
Traumatic brain injury	176	76
Speech or language impairment	175	76
Emotional disturbance	165	72
Specific learning disability	161	70
Deafness	115	50
Deaf-blindness	113	49

[a]More than one response possible.

study, the survey was administered through Qualtrics, an online survey company.

Current Instrument Validation

A pilot study was conducted using a convenience sample of 20 adapted physical educators from the Salt Lake City Valley to determine instrument validity. Participants noted that the survey was clear, easy to understand, and easy to complete. There were minor logistical issues that were suggested by the participants, and the appropriate revisions were made.

Each domain demonstrated high internal consistency reliability: physical activity and fitness (α = .82), self-actualization (α = .85), motor skill development (α = .86), and social development (α = .79)

Procedures

The Institutional Review Board for Human Subjects at the University of Utah found this investigation to be exempt. Consent was obtained through the first question on the survey, if the participant agreed to give consent; they would be presented with the rest of the survey.

With respect to the delimitations of the investigation, 557 school districts from all 50 states were identified as having at least 15,000 students enrolled. The special education administrator in those school districts was contacted in order to obtain the email addresses of their adapted physical educator(s). After contacting the district special education administrator, 261 email addresses were obtained. Those adapted physical educators were emailed a cover letter and their own personal link to the survey via Qualtrics, and they were sent biweekly reminders to complete the survey. Phase 1 of the

data collection period began on December 4, 2013, and ended March 31, 2014. From the 261 surveys sent via Qualtrics, 63.6% (n = 165) were completed.

Phase 2 of the data collection period began March 18, 2014, and ended on March 31, 2014, with an additional distribution of 151 survey links sent to adapted physical educators on a mailing list acquired from the University of Wisconsin-La Crosse. Forty-three percent (n = 65) of the surveys from Phase 2 were completed.

In total, 416 surveys were sent to adapted physical educators, and ultimately 230 responses were coded into response identities for analysis. This provided a 55.3% response rate. The acceptable response rate for social science research as suggested by Richardson (2005) is 55.6%.

Organization and Treatment of Data

Data were organized and analyzed using The Statistical Package for the Social Sciences (SPSS). Within SPSS, descriptive and frequency tables were generated. SPSS was also used to develop one-way analysis of variance (ANOVA) comparisons. Tables were prepared to compare the domain scores for adapted physical educators teaching students with mild or moderate disabilities and domain scores for adapted physical educators teaching students with severe disabilities. Tables were also prepared to compare means of adapted physical educators' certification level and adapted physical educators' years of experience. Overall domain scores were calculated in order to compare to preservice and general physical educators from previous research studies using the same survey instrument. The significance of the domain scores was tested using multivariate tests. All data were screened and cleaned for missing values and outliers. Homogeneity of variance was tested with a Levene's statistic. No values in that test were

significant, and therefore equal variances can be assumed. Normality was observed and assumed.

CHAPTER IV

RESULTS

Domain Scores

The second and third sections of the survey instrument measured the adapted physical educators' attitudes towards curricular domains for physical education. The items were organized into four overall domains. From the responses, an average total domain score for each domain as well as an average mean domain score for each domain were calculated.

Two-hundred and nineteen respondents (95%) completed the second section of the survey rating their perspective relative of teaching students with mild or moderate disabilities. For this section, the respondents rated the physical education curricular domain of social development and physical activity and fitness as more important than they rated the domains of self-actualization and motor skill development, respectively (see Table 3).

One-hundred and eighty-four respondents (67%) completed the third section of the survey rating their perspective of teaching students with severe disabilities. In this section, the respondents rated the domain of social development as most important followed by physical activity and fitness, self-actualization, and motor skill development, respectively (see Table 4). In the interest of significance differences between overall mean domain scores,

Table 3

Descriptive Domain Scores for Mild and Moderate Disabilities

Domain	M[a]	SD	Range
Social development	4.15	.529	2.22–5.00
Physical activity and fitness	4.13	.562	2.56–5.00
Self-actualization	3.85	.676	1.56–5.00
Motor skill development	3.76	.666	2.00–5.00

[a]Values closer to 5 represent higher reported importance

Table 4

Descriptive Domain Scores for Severe Disabilities

Domain	M[a]	SD	Range
Social development	3.98	.671	1.75–5.00
Physical activity and fitness	3.67	.909	1.00–5.00
Self-actualization	3.55	826	1.00–5.00
Motor skill development	3.10	.967	1.00–5.00

[a]Values closer to 5 represent higher reported importance

two one-way repeated measures test was utilized. The repeated measure test for adapted physical educators who teach students with mild or moderate disabilities indicated there were significant differences between domains. However, the assumption of sphericity was violated $\chi^2(5) = 121.93$, $p > .05$; therefore, multivariate tests are reported $\varepsilon = .75$. The results indicated that there were significant differences in mean domain scores, $V = .44$, $F(3,216) = 58.26$, $p < .001$. Pairwise comparisons followed the significant multivariate

test to establish which domains featured a significant difference using a Bonferonni adjustment. The following domains were found to be significantly different ($p < .001$) when tested against one another: physical activity and fitness versus self-actualization, physical activity and fitness versus motor skill development, self-actualization versus social development, and motor skill development versus social development. In this group, physical activity and fitness was not significantly rated as more important than social development; however, physical activity and fitness and social development were both rated significantly more important than self-actualization and motor skill development.

For teachers who taught students with severe disabilities, the repeated measures test revealed a violation of sphericity, $\chi^2(5) = 115.21$, $p < .05$, requiring multivariate tests to be performed, reporting $\varepsilon = .74$. Within the multivariate test, when performing a Bonferroni adjustment of significance ($p < .001$), all pairwise comparisons were significant except for physical activity and fitness and self-actualization, $V = .55$, $F(3.181) = 74.40$, $p < .001$. In this group, we see that physical activity and fitness was rated significantly higher than all other domains except for self-actualization. The domain scores for educators who teach students with severe disabilities were all otherwise significant differently from one another. Educators were not combined when testing for significant differences between domains due to the differences in teaching students with mild and/or moderate disabilities compared to teaching students with severe disabilities.

Years of Teaching Experience and Certification

The one-way analysis of variance (ANOVA) for domain scores, years of experience, and level of certification for the respondents who teach students with mild or

moderate disabilities and severe disabilities provided statistically significant differences. Contrasts tests were used to identify the groups responsible for the significant difference. The overall domain scores for mild and moderate disabilities by years of experience are reported in Table 5. The overall domain scores for mild and moderate disabilities by certification are reported in Table 6. The overall domain scores for severe disabilities by years of experience are reported in Table 7. The overall domain scores for severe disabilities by certification are reported in Table 8.

When testing for a difference in mean domain scores for mild and moderate disabilities by years of experience, there were two significant differences between groups (see Table 9): self-actualization, $F(2, 216) = 3.039$, $p = .05$, and social development, $F(2, 216) = 3.097$, $p = .047$. Using a contrast test, it was determined that there was a significant difference between respondents with 0–4 years of teaching experience and respondents with 5–10 years of teaching experience for both self-actualization, $t(216) = 2.318$, $p = .021$, and social development, $t(216) = 2.430$, $p = .016$. Effect sizes were calculated using Cohen's *d* and are as follows: self-actualization = .33 and social development = .33. Those can be interpreted as small effect sizes. In both significant contrasts, the adapted physical educators with 0–4 years of experience rated self-actualization and social development more importantly than adapted physical educators with 5–10 years of teaching experience. When testing for a difference in mean domain scores for mild and moderate disabilities by level of certification, there were two interactions (see Table 10), self-actualization, $F(3, 214) = 3.050$, $p = 0.30$, and social development, $F(2, 214) = 3.097$ $p = .036$. The contrast test indicated that the difference was occurring between adapted physical educators with no certification and adapted

Table 5

Overall Domain Scores for Mild and Moderate Disabilities by Years of Experience

Years of Experience	F	I	M	S
0–4	37.08	35.44*	35.42	38.28*
5–10	36.42	32.98*	33.25	36.27*
11+	37.22	34.48	33.05	37.37

Note. F = physical activity and fitness; I = self-actualization; M = motor skill development; S = social development.
* Significant ANOVA test ($p < 0.05$)

Table 6

Overall Domain Scores for Mild and Moderate Disabilities by Certification

Level of Certification	F	I	M	S
None	37.09	34.80*	34.14	38.03*
State	37.27	33.85	33.95	37.07
CAPE	36.10	31.46*	33.62	35.00*
Both	36.97	35.15	35.52	37.53

Note. F = physical activity and fitness; I = self-actualization; M = motor skill development; S = social development.
* Significant ANOVA test ($p < 0.05$)

Table 7

Overall Domain Scores for Severe Disabilities by Years of Experience

Years of Experience	F	I	M	S
0–4	31.88	33.04	28.19	36.74
5–10	31.25*	30.75	26.38	35.24
11+	34.53*	32.96	29.28	36.05

Note. F = physical activity and fitness; I = self-actualization; M = motor skill development; S = social development.
* Significant ANOVA test ($p < 0.05$)

Table 8

Overall Domain Scores for Severe Disabilities by Certification

Level of Certification	F	I	M	S
None	32.27	32.37	28.94	36.18
State	34.04	30.65	28.51	35.27
CAPE	33.50	32.22	29.80	35.04
Both	33.03	33.02	26.59	36.28

Note. F = physical activity and fitness; I = self-actualization; M = motor skill development; S = social development.

Table 9

ANOVA Domain Means for Mild and Moderate Disabilities and Years of Experience

Domain	*df*	*F*	η	*p*
F	2	1.029	0.0094	.359
I	2	3.039	0.0274	.050*
M	2	2.396	0.0217	.094
S	2	3.097	0.0279	.047*

Note: F = physical activity and fitness; I = self-actualization; M = motor skill development; S = social development.
* Significant at the $p < 0.05$ level.

physical educators with CAPE certification in both self-actualization, $t(214) = -2.525$, $p = .012$, and social development, $t(214) = -2.840$, $p = .005$. Educators with no certification scored self-actualization and social development more importantly than educators with CAPE certification. Effect sizes were calculated and reported as Cohen's *d* and are as follows: self-actualization = .41 and social development = .40. These can be interpreted as small to medium effect sizes.

When testing the mean domain scores for the adapted physical educators who teach students with severe disabilities by years of experience there was one significant difference (see Table 11) in the domain of physical activity and fitness $F(2, 181) = 3.084$, $p = .048$. The contrast test indicates that the difference occurred between adapted physical educators with 5–10 years of experience and adapted physical educators with 11 and more years of experience, $t(181) = 2.260$, $p = .025$. In this contrast, the adapted physical educators with 11 or more years of experience scored physical activity and

Table 10

ANOVA Domain Means for Mild and Moderate Disabilities and Certification

Domain	*df*	*F*	*η*	*p*
F	3	.443	0.0062	.722
I	3	3.050	0.0409	.030*
M	3	1.374	0.0189	.252
S	3	2.902	0.0390	.036*

Note. F = physical activity and fitness; I = self-actualization; M = motor skill development; S = social development.
* Significant at the $p < 0.05$ level.

Table 11

ANOVA Domain Means for Severe Disabilities by Years of Experience

Domain	*df*	*F*	*η*	*p*
F	2	3.084	0.0329	.048*
I	2	1.024	0.0112	.361
M	2	1.170	0.0128	.313
S	2	.779	0.0085	.460

Note. F = physical activity and fitness; I = self-actualization; M = motor skill development; S = social development.
* Significant at the $p < 0.05$ level.

fitness more importantly than adapted physical educators with 5–10 years of experience. The effect size between the two groups was calculated as .37, which can be interpreted as a small effect size.

When testing mean domain scores for respondents who teach students with severe disabilities by certification, there were no significant differences between the mean domain scores and levels of certification (Table 12). Participants were asked to rank 11 areas of physical education curriculum content. The adapted physical educators ranked the curricular areas from 1 to 11 with a rating of 1 meaning they spend most of their curricular time in this area (see Table 13).

Table 12

ANOVA Domain Means for Severe Disabilities and Certification

Domain	*df*	*F*	*η*	*p*
F	3	.284	0.0329	.837
I	3	1.153	0.0112	.329
M	3	1.424	0.0128	.237
S	3	.519	0.0085	.670

Note. F = physical activity and fitness; I = self-actualization; M = motor skill development; S = social development

Table 13

Rank Order of Curricular Areas

Curricular Area	*M*
Movement education	3.66
Health-related fitness	4.40
Sensory-motor integration	4.65
Lifetime leisure	4.93
Sport skills	5.08
Individual and group games	5.08
Social development	5.84
Traditional games	6.66
Self actualization	7.13
Dance	8.94
Aquatics	9.59

Note. The lower the value, the more time reported spent in that curricular area.

CHAPTER V

DISCUSSION

The primary purpose of this study was to determine what the attitudes towards physical education curricular outcomes were for adapted physical educators and how those attitudes compare to the reported rank of curricular areas. The secondary purpose was to compare the overall domain scores for adapted physical educators to general physical educators and preservice physical educators. The third purpose was to determine if years of experience and level of certification affected the attitudes.

The domain scores, contrast comparisons, and other results will be discussed in regards to their connection to general physical educators, preservice physical educators, and the future recommendations for physical education. The implications of this research study and suggestions for future research will also be discussed.

A factor to take into consideration is the data reported in the 31st Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (2009). Over 3 million students are eligible to receive adapted physical education and less than 13 thousand physical educators are reported as delivering adapted physical education services to students with disabilities. Obrusnikova and Kelly (2009) report that the average caseload for an adapted physical educator is 51 students. With the figures for the number of students receiving services and the number of adapted physical educators reported to be hired to teach adapted physical education, the caseload for those educators

would be approximately 230 students. With such a large number of students, one can assume that goals are very difficult to achieve for every student. It might also be important to discover the amount of time those educators have to develop goals, design curriculum, and implement their physical education programs.

Value Orientations

The results from this study provide an idea of what domains adapted physical educators who participated in this study perceived to be most important in the physical education curriculum. While a ceiling effect might have taken place, the respondents were primarily focused on the social development and the physical activity and fitness of their students. Kulinna and Silverman (2000) note that physical educators might value all orientations and that one may emerge as a dominant value orientation at a given time. The respondents in this study demonstrated that there might be more than one equally dominant value orientation at one particular time.

Physical Activity and Fitness

Physical activity and fitness was rated highly important by the respondents in this study along with the domain of social development. Physical activity and fitness are seen as integral areas of physical education, especially since governmental agencies and national organizations have declared physical education as one of the best places for students to satisfy their recommended amount of daily physical activity (Kulinna & Silverman, 2000). From these data, we can interpret that adapted physical educators recognize the importance of the domain of physical activity and fitness by their high degree of perceived importance reported towards physical activity and fitness relative to

other domains and also in the reported amount of time spent teaching physical activity and fitness. When investigating the relationship between the belief system of physical activity and fitness and the action of teaching physical activity and fitness, it was found that there was no relationship between belief systems and the physical education content for physical educators (Kulinna et al., 2000). Researchers noted that there are many variables that can affect this relationship between the teacher's belief system and what they teach. These variables include the educator's knowledge, their self-efficacy, the space and equipment they have access to, and their intentions to teach what is in line with their beliefs systems.

Similar to the previously studied general physical educators and preservice physical educators, adapted physical educators in this study reported high importance for all of the domains. In addition, adapted physical educators concur with preservice physical educators and general physical educators placing the highest importance on the physical activity and fitness domain. The field of physical education as a whole is trending in the direction of placing physical activity and fitness as an integral component in the foundation of physical education curriculum. For adapted physical educators, physical activity and fitness were rated highly across all levels of disability, certification, and years of experience. Yet the only real difference in attitude towards physical activity and fitness was between adapted physical educators with 5–10 years of experience and adapted physical educators with 11 or more years of experience. The research on the obesity rates of students with disabilities might be the catalyst for the change in the amount of focus on fitness in PETE and adapted physical education programs. Future researchers might examine the changes and improvements to the PETE programs in

regards to emphasizing physical activity and fitness in adapted physical education more so than in the past.

Recent research on physical education frequently involves measuring and analyzing the amount of physical activity within the physical education environment. Physical activity and fitness within physical education has been an important topic in both the public schools and within governmental agencies like the National Academy of Kinesiology and the Center for Disease Control (Comprehensive School Physical Activity Program, 2013).

Self-Actualization

Self-actualization has been noted to be a natural by-product of success in physical education. Adapted physical educators mention that those two domains tend to go hand in hand within the physical education environment (JOPERD, 2003). When a student is successful, their self-esteem, self-efficacy, and self-concept will naturally increase, a classic chicken and egg situation. The adapted physical educators also questioned why is there a need to choose self-esteem or motor skill development as a primary focus for their physical education class. They suggested that both domains should be considered primary domains, and both domains should be the focus of adapted physical education because we want the student's to be successful in physical education, and we want the students to increase their self-esteem and self-concept for physical activities. Due to its nature, adapted physical education tends to feature the development of self-esteem paired with motor skill development because increased self-concept and self-esteem within the physical environment will increase the likelihood that the students will be more physically active outside of the school environment. Despite its reported level of

importance, self-esteem is not considered an objective or a curricular area defined by law.

Motor Skill Development

Another discussion point within physical education is the balance of motor skill development and physical activity and fitness as primary objectives within physical education. Historically, physical education has been dominated by content and curriculum focus in these two areas (Jewett, 1989). Traditionally, motor skill development has been the foundation of physical education. As reported in the data from this study, adapted physical educators rated motor skill development as the third, and in some cases, the fourth in terms of importance. Previously studied preservice physical educators and in-service general physical educators also rated motor skill development as the third most important domain in their respective studies (Kulinna et al., 2010; Kulinna & Silverman, 2000). In this sense, there is agreement across these three populations.

Interestingly, although the adapted physical educators in this study ranked motor skill development as third or fourth in terms of importance, they reported that motor skill development was the physical education domain in which they spent most of their instructional time. Chandler and Green (1995) found vastly different results in their study. The adapted physical educators in the Chandler and Green study reported spending 28% of their instructional time in motor skill development, ranking it the third domain out of five in terms of reported percentage of instructional time spent in that area. Adapted physical educators in this investigation have demonstrated the disconnect between their belief systems and their actions toward teaching motor skill development based on their reported time spent in motor skill development (see Table 13). Motor skill development had an average rank of 3.66 out of the 11 curricular areas, making it the

highest ranked curricular area for adapted physical educators. More research can be done to answer this question and to discover the amount of actual time spent and emphasis on physical activity and fitness and motor skill development in adapted physical education classes and to determine the correlation between time spent and the educators' reported belief systems. Similar to physical activity and fitness, there are many factors that affect the selection of curriculum content (Kulinna et al., 2000). Somewhere in the process of selecting and delivering curriculum content for their belief systems, interrelated factors cause them to continue focusing on motor skill development despite what they may think is important for physical education.

Social Development

Results from this study showed that adapted physical educators reported that social development along with physical activity and fitness were of the highest level of importance when teaching students with mild and/or moderate disabilities. When teaching students with severe disabilities, adapted physical educators rated the domain of social development as the most important domain. Physical educators and preservice physical educators both reported that social development was the fourth most important physical education domain (Kulinna et al., 2010; Kulinna & Silverman, 2000).

With the incidence of autism continually rising to affecting 1 in 68 children (Center for Disease Control, 2014), we can expect to find more children with autism in adapted physical educator as well. In fact, 98% of the adapted physical educators reported teaching students with autism. Autism, as defined by law, is a developmental disability that significantly affects verbal and nonverbal communication and social interaction (IDEA, 2004). Students with autism who are nonvocal and nonverbal have

difficulties expressing enjoyment, frustration, and comprehension of physical education content. They may also have difficulties with receptive language and may not comprehend direct instructions. The teacher has to make modifications to the way instructions are presented in order for students with autism to understand what is expected. If the teacher is not communicating the physical education content in a way that is being received by the student, little to no learning will take place. The social needs for students with autism as well as other disabilities may explain the amount of importance placed on the social development domain by adapted physical educators. Educators of students with severe autism undoubtedly spend much of their day working with several methods of communication, whether that is sign language, visual supports, Picture Exchange Communication System (PECS), or spoken verbal communication. The social needs and methods used within the educational setting for students with severe autism might serve as an ever-running theme of their classroom or school. Unlike a student's ability to learn how to hit a ball off of a tee or a pitch, the need for social skills is constant for a student who has a disability that is defined with difficulties in communication and social development.

Jewet (1989) describes a physical education curriculum that is based on ecological curriculum theory that focuses on multiple domains of learning and supports the learner through intensive and significant experiences. The ecological curriculum would also support the individualized nature of adapted physical education. The adapted physical educator must first determine the social development needs, the current level of fitness, the most meaningful and relevant physical activities, and the present level of performance of fundamental movement skills of each and every student they teach before

developing the goals for the curriculum. Using social development as a primary focus of physical education, the adapted physical educator can learn more about the students' strengths and weaknesses within the physical education curriculum content. The educator can also learn more about the best method for that student when it comes to expressive and receptive language. The social aspect of physical education depends on the verbal and vocal abilities of the students. For the educator, it may be difficult to determine their students' needs, skill level, and comprehension of physical education content without a primary focus on social development.

Years of Teaching Experience

There are many comparisons and significant differences between groups when looking at years of experience. We find that novice adapted physical educators (0–4 years of experience) of students with mild and/or moderate disabilities place significantly more importance on self-actualization and social development than similar adapted physical educators with 5–10 years of teaching experience. Adapted physical educators with 11 or more years of experience who taught students with severe disabilities place significantly more importance on physical activity and fitness than adapted physical educators with 5–10 years of experience.

Novice adapted physical educators might see all domains as equally important objectives for physical education. However, they may also see basic classroom management as a more important objective (Kulinna & Silverman, 2000). Four domains for physical educations, behavior management, and paperwork can be overwhelming of novice teachers. Lavay, Guthrie, and Henderson (2014) reported that the stress and frustration novice adapted physical educators experienced due to their lack of behavior

management skills attributed to their leaving the field. An adapted physical educator with more experiences may have had more time to create, establish, and reflect on their belief systems and have also solidified their classroom management and behavioral strategies for physical education resulting in a shift of their belief systems to the more relevant content within physical education.

Certification

Certification within the field of adapted physical education is a topic that is garnering more attention since the implementation of No Child Left Behind (NCLB, 2001). A major section of NCLB, teacher quality, dictates that school districts must feature highly qualified educators, especially in high-need schools. In this current study, 49% of the educators were Certified Adapted Physical Educators. This data might call attention to the increasing number of adapted physical educators that are already highly qualified. In a recent survey, (Colorado Department of Education, personal communication, October, 2014), it was reported that only nine states require an adapted physical education teaching license or endorsement. It was also reported that many states expressed that an introductory course in adapted physical education course for 3 credit hours would meet the minimum requirement to teach adapted physical education.

From the results of this study, we learned that adapted physical educators with no adapted physical education certification who teach students with mild and/or moderate disabilities scored the domains of self-actualization and social development as significantly ($p < .30$, $p < .36$) more important than those with CAPE certification. It is important to note that the APENS standards do not specifically identify self-actualization and social development as content areas. The APENS Standards focuses on motor skill

development, human development, assessment, and teacher behaviors. A CAPE might not have the additional content knowledge to rate self-actualization and social development as important due to the amount of content knowledge that is stressed in the APENS Standards. We can also look at the difference in professional preparation of these two groups. An adapted physical educator with no certification for adapted physical education may not live in a state that has a certification for adapted physical education or they may not meet the minimum requirements for the certification. A CAPE has completed all the above-mentioned requirements to sit for the exam. Adapted physical educators with no certification who may have not gone through professional preparation programs for adapted physical education might be subject to additional anxiety and stress (Darling-Hammond, 2000).

Certification did not create a difference in adapted physical educators who teach students with severe disabilities. Domain scores were not found to be statistically different between educators without certification and those educators with any level of certification.

In this study, our sample mean age was approximately 44 years of age. In addition to the high mean age, 53% of the sample had 11 or more years of teaching experience. All of those facts become important when looking at the qualifications for CAPE certification. Through the Adapted Physical Education National Standards (APENS), there are two ways for teachers in public schools to become a CAPE. The first method requires passing a national exam, obtaining a bachelor's in physical education, completing a minimum of 12 semester hours of coursework in adapted physical education, having a minimum of 200 hours of teaching physical education to individuals

with disabilities, and holding a current valid teaching certification.

The second method allows teachers with more than 10 years of adapted physical education teaching experience to complete specific areas of professional development, but not requiring these adapted physical educators to take the exam. The two methods of obtaining certification allow for two different sets of content knowledge within CAPE certified educators. The first method will most likely tend to feature younger, newly certified teachers with the newest information from their PETE program. Their belief systems include knowledge from their PETE program, their clinical experiences, and their ability to reflect on the content in their PETE program and the content in the APENS Standards. The second method caters to older, more experienced teachers whose beliefs systems are, assumedly, more formed through their many teaching experiences. Because they are not required to take the exam, they would not ordinarily read the APENS Standards or the study guide, nor would they sit for the exam. Despite the fact that these educators have the same national certification, it is still possible to have different knowledge bases. Adapted physical educators with no certification might be apt to place more importance on social development for many of the same reasons educators with certification or licensure did, but due to their lack of professional preparation they will experience more anxiety about the social needs of their students and the management of the students with disabilities (Darling-Hammond, 2000). Certification and professional preparation will increase the tools and knowledge that adapted physical educators can take into their classes. Increased tools and knowledge will help to decrease anxiety and increase educator's ability to address the domains of physical education in a way that is congruent with their belief systems.

Future Direction

There are several suggestions for future studies involving adapted physical educators' attitudes toward curricular outcomes for physical education. These recommendations for future studies are as follows: to conduct a similar study with a larger sample size, to determine a correlation between perceived importance of each domain with current teaching practice, to perform longitudinal research that tracks physical educators' belief systems over time to determine factors that may change their belief systems, and determine the correlation between domain scores and grade level.

In continuing this line of research, a replication of the study with minor changes would yield additional research and critical information. The replication study should feature a larger sample size to allow for more variability of respondents and responses. A larger sample size would also provide an increased level of power, which would allow more generalizability to the field of adapted physical education. Extending the research to major school districts should be one way to increase sample size and provide comparative information about the educational practices in urban areas versus suburban and rural areas. Urban areas tend to be the center for the effects of educational policy and budget deficits. They also may experience a very different set of interrelated factors when compared to educators in suburban or rural environments.

Future studies should be conducted to determine a correlation between perceived importance of each domain with current teaching practice. In a previous study, physical educators demonstrated a nonsignificant relationship between the reported belief scores and the actual teaching of physical activity and fitness due to the interrelated factors for physical education, for example, space, equipment, and organization of curriculum

content (Kulinna et al., 2000). Discovering if there are interrelated factors for adapted physical education and if the interrelated factors can help explain the disconnect between beliefs systems and physical education content taught is important for teacher training programs. Teacher training programs can help prepare novice teachers to anticipate those factors when preparing curriculum content.

Another recommendation for this line of research would be to conduct a longitudinal study with recent college graduates who are also recently CAPE certified and track their attitudes towards the curricular domains during their PETE program, upon graduation, and within their first 5 years of teaching. Data from this research could provide a depth of information that is useful for teacher training programs. An investigation like this would provide data that would allow the field of physical education to see how teacher training programs, national certification, and years of experience can change the belief systems over time and how that may effect the curriculum choices.

Comparing the grade level taught by the adapted physical educators and their attitudes towards the physical education domains might provide more explanation of their domain scores. In previous studies, general physical educators demonstrated the grade level that they taught shifted their level of importance for the physical education domains. Elementary school physical educators placed more importance on motor skill development, while secondary physical educators placed more importance on physical activity and fitness. Do adapted physical educators follow this same trend? Or do they continue teaching motor skill development at the secondary level due to the fact that the students' disability is affecting their mastery of the basic skills needed for physical activity for fitness?

Implications

This survey of adapted physical educators has many implications to the field of adapted physical education. Obtaining a snapshot into the field of adapted physical education provides an opportunity to determine what trends exist within teaching the physical education domains. The discovery of the instructional time physical education curricular areas are being taught and the dominant preference for the belief systems of physical activity and fitness and social development provides the following recommendations for the field and for professional preparation programs.

If certification is necessary to gain employment in adapted physical education, it is imperative for PETE and APE programs to use the APENS Standards as a guide when organizing content. Pairing the APENS Standards with the PETE content allows the students to learn the PETE content and the APENS standards simultaneously. PETE/APE programs can use and reference the APENS standards when writing their course objectives. By using language that is uniform in determining PETE and APENS content, the preservice teachers will be able to make immediate connections between the content for both areas.

Full preparation programs create better, more efficient teachers (Darling-Hammond, 2000). Preservice students attending a university PETE/APE program that updates their curriculum content based on the current trends within physical education will be more prepared for the field they are about to enter. They will be able to anticipate job responsibilities, average caseload, and required professional preparation. From this investigation, PETE/APE programs can see the imbalance between perceived importance of physical education domains and the reported physical education curricular areas that

are being taught. These facts could help professors organize their content to overcome the typical "roll the ball out" mentality where physical education teachers have a narrow selection of physical education content that traditionally results in team sports being taught. Instructing preservice adapted physical educators on how to represent all domains of physical education within their early lesson plan writing experiences will help to build and maintain the habit of focusing on more than one domain. The PETE/APE program could also offer elective classes that feature preferred combinations of physical education curriculum content. For example, if a preservice physical educator is interested in the balance of physical activity and fitness with self-actualization, she/he could enroll in an additional course that instructs them on how to specifically represent and emphasize both domains in their physical education classes. From the data, we see that current adapted physical educators place importance on all domains, and they might prefer a combination of two, three, and even four domains at one particular time. Preservice adapted physical educators must be prepared for the multifaceted and individualized nature of the current job responsibilities in order to contribute to the field and be effective right away.

Summary

This investigation yielded interesting and important results. When comparing adapted physical educators to general physical educators and preservice physical educators, adapted physical educators are following a similar trend, but there are also some notable differences. General physical educators and preservice physical educators favored one domain above all others, physical activity and fitness. Adapted physical educators agree, but they also report that social development is as important as physical activity and fitness. Adapted physical educators also demonstrate a disconnect from their

belief systems and what is being taught in their classes.

Adapted physical education has many unique features not found in general physical education. Students with disabilities are unique and each comes with their own set of needs. In general physical education, the curriculum is designed by individuals who have determined what the students in a specific grade will need to know to be physically literate. The adapted physical education curriculum is designed using the objectives stated in the general physical education curriculum and modifying these objectives based on the specific needs of the student(s) in the class. Providing preservice and in-service educators with the best, most current knowledge will increase their effectiveness and increase their students' ability to learn the physical education content.

APPENDIX A

SURVEY INSTRUMENT

Adapted Physical Educators' Attitudes Toward Curriculum for Physical Education

Section 1: Demographic Information

1. Do you give consent to participate in this study?
    a. No
    b. Yes
2. Name (please print):
3. Gender
    a. Male
    b. Female
4. Age
    a. 18-20
    b. 21
    c. 22
    d. 23
    e. 24
    f. 25
    g. 26
    h. 27
    i. 28
    j. 29
    k. 30
    l. 31
    m. 32
    n. 33
    o. 34
    p. 35
    q. 36
    r. 37
    s. 38
    t. 39
    u. 40
    v. 41
    w. 42
    x. 43
    y. 44
    z. 45
    aa. 46
    bb. 47
    cc. 48
    dd. 49
    ee. 50
    ff. 51
    gg. 52
    hh. 53
    ii. 54
    jj. 55
    kk. 56
    ll. 57
    mm. 58
    nn. 59
    oo. 60
    pp. 61+
5. How long have you been teaching adapted physical education?
    a. 0 years
    b. 1 year
    c. 2 years
    d. 3 years
    e. 4 years
    f. 5 years
    g. 6 years
    h. 7 years
    i. 8 years
    j. 9 years
    k. 10 years
    l. 11+ years

6. Grade level that you teach (please select all that apply)
    a. Preschool
    b. Elementary (K-5 or K-6)
    c. Middle School (6-8, 7-8, or 7-9)
    d. High School (9-12 or 10-12)
7. Name of school district(s) in which you teach
8. Number of school(s) in which you teach
9. How many students are you responsible for providing adapted physical education services for this year?
10. Would you consider your setting(s) (please select all that apply)
    a. Suburban
    b. Urban
    c. Rural
11. Is there any special training required in your district to become an adapted physical education teacher?
    a. Yes
    b. No
12. If there is special training required in your district, please specify what the training is (Master's degree in APE, CAPE, etc.)
13. Do you have a state endorsement, certification, or licensure for adapted physical education (please select all that apply)
    a. State Endorsement
    b. State Certification
    c. State License
    d. None
14. Are you a Certified Adapted Physical Educator (CAPE)?
    a. Yes
    b. No
15. Level of education (please select all that apply)
    a. Bachelor's Degree
    b. Master's Degree
    c. PhD
16. Did you attend a college or university that featured an adapted physical education major, minor, or emphasis?
    a. Yes
    b. No
    c. Do not know
17. If you answered yes, please specify the college or university.
18. If you attended a college or university that had an Adapted Physical Education major, minor or emphasis, did you participate in and complete the program?
    a. Yes
    b. No

19. What disabilities do you teach (please select all that apply)
    a. Autism
    b. Deaf-blindness
    c. Deafness
    d. Developmental delay
    e. Emotional disturbance
    f. Hearing impairment
    g. Intellectual disability (including Down syndrome)
    h. Multiple disabilities
    i. Orthopedic impairment
    j. Other health impairment
    k. Specific learning disability
    l. Speech of language impairment
    m. Traumatic brain injury
    n. Visual impairment, including blindness
20. Please rank the following curricular areas, 1 being you spend most of your instruction time on this curricular area. Please click and drag the number to the curricular area.
    a. Sensory-motor integration
    b. Lifetime leisure
    c. Health-related fitness
    d. Movement education
    e. Traditional games
    f. Sport Skills
    g. Aquatics
    h. Dance
    i. Individual and group games
    j. Social Development
    k. Self-Actualization
21. Do you teach students with (please select all that apply)
    a. Mild and/or Moderate disabilities
    b. Severe disabilities

Section 2: For students with mild or moderate disabilities

Adapted Physical Education Teachers' Attitudes Toward Curriculum in Adapted Physical Education

This instrument consists of sets of statements that describe values and beliefs related to adapted physical education. Please read the items in each group and rate them according to importance to you as an adapted physical education teacher.

DIRECTIONS:

1. Please read each statement carefully before answering the question.
2. Consider the importance of each statement to you as an adapted physical educator.
3. Please try to provide some variation in your responses. Use the 5 rating only for items you feel are extremely important.
4. Click and drag the bar to the number you want to assign to that item.

1 = Not Important

2 = Not Very Important

3 = Somewhat Important

4 = Very Important

5 = Extremely Important

SET 1: For students with mild or moderate disabilities

How important are the following goals for adapted physical education?
1 = Not Important 5 = Extremely Important

To develop components of Health-Related Fitness	1	2	3	4	5
To develop social awareness and concern	1	2	3	4	5
To develop motor skill proficiency	1	2	3	4	5
To develop personal growth (e.g., increased self-concept	1	2	3	4	5

SET 2: For students with mild or moderate disabilities

How important are the following as programmatic foci for adapted physical education?

1 = Not Important 5 = Extremely Important

Promoting the development of motor skills for participation in a variety of sport activities	1	2	3	4	5
Promoting concern over gender equity and equal opportunities for all students to participate	1	2	3	4	5
Promoting increased self-esteem in students	1	2	3	4	5
Promoting regular physical activity habits in students	1	2	3	4	5

SET 3: For students with mild or moderate disabilities

How important are the following adapted physical education outcomes in promoting participation in physical activities?

1 = Not Important 5 = Extremely Important

Developing positive social interactions among students	1	2	3	4	5
Developing increased self-confidence or self-efficacy in students	1	2	3	4	5
Developing health-benefits from regular participation in physical activities	1	2	3	4	5
Developing motor skills that can be used to participate in a variety of sports and activities	1	2	3	4	5

SET 4: For students with mild or moderate disabilities

How important are the following outcomes of adapted physical education?

1= Not Important 5= Extremely Important

Improved levels of health and fitness in students	1	2	3	4	5
Improved motor skill performance needed for participation in a variety of sports and activities	1	2	3	4	5
Improved social interactions and acceptance between students	1	2	3	4	5
Improvement in the emotional release opportunities and a reduction in anxiety levels for individual students	1	2	3	4	5

SET 5: For students with mild or moderate disabilities

How important are the following objectives for adapted physical education at the primary level?

1 = Not Important 5 = Extremely Important

Mental development of the students (e.g., understanding, thinking skills)	1	2	3	4	5
Physical development of the students (e.g., fitness)	1	2	3	4	5
Object handling development of the students (e.g., ball handling)	1	2	3	4	5
Social development of the students (e.g., social responsibility)	1	2	3	4	5

SET 6: For students with mild or moderate disabilities

How influential are the following factors in determining student participation in physical activities?

1 = Not Important 5 = Extremely Important

The attitudes of an individual toward physical activities	1	2	3	4	5
The social, cultural, political & economic conditions an individual faces	1	2	3	4	5
The motor skills an individual possesses for sports participation	1	2	3	4	5
The knowledge held by an individual Of the benefits of regular participation in physical activities	1	2	3	4	5

SET 7: For students with mild or moderate disabilities

How important are the following characteristics of a physically educated person?

1 = Not Important 5 = Extremely Important

Performs at an optimal physical level during sport performance	1	2	3	4	5
Enjoys participation in physical activities	1	2	3	4	5
Maintains a level of physical fitness consistent with health benefits	1	2	3	4	5
Demonstrates responsible personal and social behavior during participation in physical activities	1	2	3	4	5

SET 8: For students with mild or moderate disabilities

How important are the following curricular foci for adapted physical education?

1 = Not Important 5 = Extremely Important

A traditional physical education approach to the curriculum including games, sports, gymnastics and dance	1	2	3	4	5
A health-related physical activity approach to the curriculum promoting levels of physical fitness for health benefits	1	2	3	4	5
A humanistic approach to the curriculum promoting the personal growth of students	1	2	3	4	5
A social reconstruction approach to the curriculum including social awareness and advocacy	1	2	3	4	5

SET 9: For students with mild or moderate disabilities

How important are the following objectives for adapted physical education classes?

1 = Not Important 5 = Extremely Important

Providing large amounts of activity time for students to practice motor skills	1	2	3	4	5
Providing large amounts of activity time for students to work together in groups solving problems	1	2	3	4	5
Providing large amounts of time for students to work on their own gaining confidence in their movement abilities	1	2	3	4	5
Providing large amounts of activity time for participation in activities leading to the development of physical fitness in students	1	2	3	4	5

Section 3: For students with severe disabilities

SET 1: For students with severe disabilities

How important are the following goals for adapted physical education?

1 = Not Important 5 = Extremely Important

To develop components of Health-Related Fitness	1	2	3	4	5
To develop social awareness and concern	1	2	3	4	5
To develop motor skill proficiency	1	2	3	4	5
To develop personal growth (e.g., increased self-concept)	1	2	3	4	5

SET 2: For students with severe disabilities

How important are the following as programmatic foci for adapted physical education?

1 = Not Important 5 = Extremely Important

Promoting the development of motor skills for participation in a variety of sport activities	1	2	3	4	5
Promoting concern over gender equity and equal opportunities for all students to participate	1	2	3	4	5
Promoting increased self-esteem in students	1	2	3	4	5
Promoting regular physical activity habits in students	1	2	3	4	5

SET 3: For students with severe disabilities

How important are the following adapted physical education outcomes in promoting participation in physical activities?

1 = Not Important 5 = Extremely Important

Developing positive social interactions among students	1	2	3	4	5
Developing increased self-confidence or self-efficacy in students	1	2	3	4	5
Developing health-benefits from regular participation in physical activities	1	2	3	4	5
Developing motor skills that can be used to participate in a variety of sports and activities	1	2	3	4	5

SET 4: For students with severe disabilities

How important are the following outcomes of adapted physical education?

1= Not Important 5= Extremely Important

Improved levels of health and fitness in students	1	2	3	4	5
Improved motor skill performance needed for participation in a variety of sports and activities	1	2	3	4	5
Improved social interactions and acceptance between students	1	2	3	4	5
Improvement in the emotional release opportunities and a reduction in anxiety levels for individual students	1	2	3	4	5

SET 5: For students with severe disabilities

How important are the following objectives for adapted physical education at the primary level?

1 = Not Important 5 = Extremely Important

Mental development of the students (e.g., understanding, thinking skills)	1	2	3	4	5
Physical development of the students (e.g., fitness)	1	2	3	4	5
Object handling development of the students (e.g., ball handling)	1	2	3	4	5
Social development of the students (e.g., social responsibility)	1	2	3	4	5

SET 6: For students with severe disabilities

How influential are the following factors in determining student participation in physical activities?

1 = Not Important 5 = Extremely Important

The attitudes of an individual toward physical activities	1	2	3	4	5
The social, cultural, political & economic conditions an individual faces	1	2	3	4	5
The motor skills an individual possesses for sports participation	1	2	3	4	5
The knowledge held by an individual Of the benefits of regular participation in physical activities	1	2	3	4	5

SET 7: For students with severe disabilities

How important are the following characteristics of a physically educated person?

1 = Not Important 5 = Extremely Important

Performs at an optimal physical level during sport performance	1	2	3	4	5
Enjoys participation in physical activities	1	2	3	4	5
Maintains a level of physical fitness consistent with health benefits	1	2	3	4	5
Demonstrates responsible personal and social behavior during participation in physical activities	1	2	3	4	5

SET 8: For students with severe disabilities

How important are the following curricular foci for adapted physical education?

1 = Not Important 5 = Extremely Important

A traditional physical education approach to the curriculum including games, sports, gymnastics and dance	1	2	3	4	5
A health-related physical activity approach to the curriculum promoting levels of physical fitness for health benefits	1	2	3	4	5
A humanistic approach to the curriculum promoting the personal growth of students	1	2	3	4	5
A social reconstruction approach to the curriculum including social awareness and advocacy	1	2	3	4	5

SET 9: For students with severe disabilities

How important are the following objectives for adapted physical education classes?

1 = Not Important 5 = Extremely Important

Providing large amounts of activity time for students to practice motor skills	1	2	3	4	5
Providing large amounts of activity time for students to work together in groups solving problems	1	2	3	4	5
Providing large amounts of time for students to work on their own gaining confidence in their movement abilities	1	2	3	4	5
Providing large amounts of activity time for participation in activities leading to the development of physical fitness in student	1	2	3	4	5

APPENDIX B

COVER LETTER

Survey of Adapted Physical Education Teachers' Attitudes Towards Curricular Outcomes for Adapted Physical Education

The purpose of this research study is to determine current adapted physical educator's attitudes towards curricular outcomes for physical education. We are doing this study because there is an overall lack of knowledge about the curricular content being selected and delivered in adapted physical education.

As the Special Education Administrator, you are being contacted to spark interest in your district to participate in the survey. You are also being contacted to obtain the email addresses of the adapted physical education teachers in your district. Once the email addresses are obtained, the survey will be sent to them. From these results, adapted physical educators will be able to see what physical education content is being taught to students with disabilities. Your adapted physical education teachers will be entered into a raffle where they will have the chance to win one of three gift cards to an equipment company or the store of their choice.

Once the adapted physical educators click the survey link they will be prompted to give consent to participate in the research investigation. Once consent is obtained, they will be presented with the survey. On this survey, they will have the option to complete the survey anonymously. If they choose to provide their name, the adapted physical education teachers will be shielded from any risks through coded data that will protect their identity and survey responses. Email addresses will be organized into a coded form that will be used by any research assistants.

If you have any questions complaints or if you feel you have been harmed by this research please contact Tacara Lovings, Department of Exercise and Sport Science, University of Utah, adaptedphysicaleducatorsurvey@gmail.com.

Contact the Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also, contact the IRB if you have questions, complaints or concerns that you do not feel you can discuss with the investigator. The University of Utah IRB may be reached by phone at (801) 581-3655 or by e-mail at irb@hsc.utah.edu.

Participation in this study is voluntary. You can choose not to take part. You can choose not to finish the questionnaire or omit any question you prefer not to answer without penalty or loss of benefits.

Thank you for taking time to read this email and considering participating in this survey. Your response will benefit the field of adapted physical education and the students with disabilities that benefit from your services

REFERENCES

Adapted Physical Education National Standards. (2008.) *What is adapted physical education?* Retrieved from http://www.apens.org/whatisape.html

Auxter, D., Pyfer, J., Zittel, L., & Roth, K. (2010). *Principles and methods of adapted physical education and recreation* (11th ed.). New York, NY: McGraw-Hill.

Center for Disease Control (2013). *Comprehensive School Physical Activity Program* (CSPAP). Retrieved from http://www.cdc.gov/healthyyouth/physicalactivity/cspap.htm

Center for Education Policy Research. (2011). *Learning about teacher effectiveness: The SDP human capital diagnostic*. Cambridge, MA: Harvard University. Retrieved from http://www.gse.harvard.edu/cepr-resources/files/news-events/sdp-fcs-hc.pdf

Chandler, J. P., & Greene, J. L. (1995). A statewide survey of adapted physical education service delivery and teacher in-service training. *Adapted Physical Activity Quarterly*, *12*(3), 262–274.

Common Core State Standards Initiative. (2014). *About the Standards*. Retrieved 2014 from http://www.corestandards.org/about-the-standards/

Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives*, *8*(1), 7-8.

Di Carlo, M. (2010, November 18). The teaching experience. *Shanker Blog*. Retrieved from http://shankerblog.org/?p=1319#more-1319

Education of All Handicapped Children Act of 1975. Public Law 94-142, 89 Stat. 77

Ennis, C. D. (2011). Physical education curriculum priorities: Evidence for education and skillfulness. *Quest*, *63*, 5–18. doi:10.1080/00336297.2011.10483659

Ennis, C. D. (1992). Curriculum theory as practiced: Case studies of operationalized value orientations [Electronic version]. *Journal of Teaching in Physical Education*, *11*, 358-375.

Ernest, P. (1989). The knowledge, beliefs and attitudes of the mathematics teacher: A model. *Journal of Education for Teaching*, *15*(1), 13–34. doi: 10.1080/0260747890150102

Great Schools Inc. (2013). *Alaska School Districts*. Retrieved from http://www.greatschools.org/alaska/

Hanushek, E. A., Kain, J. F., O'Brien, D. M., & Rivkin, S. G. (2004). NBER Working Paper 15816: The market for teacher quality. Retrieved from http://hanushek.stanford.edu/publications/teacher-quality

Kulinna, P. H., Silverman, S., & Keating, X. D. (2000). Relationship between teachers' belief systems and actions toward teaching physical activity and fitness. *Journal of Teaching In Physical Education*, *19*, 206–220.

Kulinna, P. H., Brusseau, T., Ferry, M., & Cothran, D. (2010). Preservice teachers' belief systems toward curricular outcomes for physical education. *Research Quarterly for Exercise and Sport*, *81*(2), 189–198. doi:10.1080/02701367.2010.10599666

Jewett, A. E. (1989). Curriculum theory in physical education. *International Review of Education*, *35*(1), 35–49. doi:10.1007/BF00597682

Kelly, L. (2006). *Adapted physical education nation standards* (2nd ed.) Champaign, IL: Human Kinetics.

Kulinna, P. H., & Silverman, S. (1999). The development and validation of scores on a measure of teachers' attitudes toward teaching physical activity and fitness. *Educational and Psychological Measurement, 59*, 507–517. doi: 10.1177/00131649921969893

Kulinna, P. H., & Silverman, S. (2000). Teachers' attitudes toward teaching physical activity and fitness. *Research Quarterly for Exercise and Sport, 71,* 80–84. doi:10.1080/02701367.2000.10608884

Ladd, H. F. (2013). Why experienced teachers are important and what can be done to develop them. *Scholar's Strategy Network* [PDF file]. Retrieved from http://www.scholarsstrategynetwork.org/sites/default/files/ssn_basic_facts_ladd_on_the_importance_of_experienced_teacgers_1.pdf

Lavay, B. W., French, R., & Henderson, H. L. (2014). The behavior management training and teaching practices of nationally certified adapted physical education (CAPE) teachers. *Palestra*, *28*(1), 24–31.

Lytle, R., Lavay, B., & Rizzo, T. (2010). What is a highly qualified adapted physical education teacher? *Journal of Physical Education, Recreation & Dance*, *81*(2), 40–44. doi:10.1080/07303084.2010.10598433

Marsh, C. J., & Willis, G. (2003). *Curriculum: Alternative approaches, ongoing issues* (3rd ed.). Upper Saddle River, NJ: Merrill Prentice Hall.

Obrusnikova, I., & Kelly, L. (2009). Caseloads and job demographics of adapted physical educators in the United States. *Perceptual Motor Skills, 109*, 737–746. doi:10.2466/pms.109.3.737-746

Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62,* 307–332. http://dx.doi.org/10.3102/00346543062003307O

"Should adapted physical educators be required to pass the adapted physical education national standards exam?" [Editorial]. (2009). Journal of Physical Education, Recreation & Dance, 80(3), 50–51. doi:10.1080/07303084.2009.10598297

"Should the main objective of adapted physical education be the development of motor skills or the development of self-esteem?" [Editorial]. (2003). *Journal of Physical Education, Recreation & Dance*, *74*(9), 10–12. doi:10.1080/07303084.2003. 10608512

Starc, G., & Strel, J. (2012). Influence of the quality implementation of a physical education curriculum on the physical development and physical fitness of children. *BMC Public Health*, *12*(61). doi:10.1186/1471-2458-12-61

U.S. Department of Education, Office of Special Education and Rehabilitative Services, Office of Special Education Programs. (2009). *31st Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act.* [PDF file]. Retrieved from http://www2.ed.gov/about/reports/annual/osep/2009/parts-b-c/31st-idea-arc.pdf

U.S. Equal Employment Opportunity Commission. (2008). *Facts about the Americans with Disabilities Act.* Annapolis Junction, MD: U.S. Equal Employment Opportunity Commission. Retrieved April 1, 2013, from http://www.eeoc.gov/eeoc/publications/fs-ada.cfm

U.S. Department of Health and Human Services, Office of Civil Rights. (2006). *Fact Sheet*, *Your Rights Under Section 504 of the Rehabilitation Act*. [PDF file]. U.S. Health and Human Services. Retrieved from http://www.hhs.gov/ocr/civilrights/resources/factsheets/504.pdf

Winnick, J. (2005). *Adapted Physical Education and Sport* (4th ed.) Champlain, IL: Human Kinetics.

Zhang, J., Kelly, L., Berkey, D., Joseph, D., & Chen, S. (2000). The prevalence-based need for adapted physical education teachers in the United States. *Adapted Physical Activity Quarterly 17*(3), 297–309.